In the Claims

Claims 1 through 11 are canceled.

12. (Previously Amended) A method of calculating approximations of sets of entry and exit properties for each basic block of a computer procedure prior to performance of an iterative dataflow analysis, each basic block being associated with a set of entry and exit properties, as well as property modifications caused by the basic block, wherein each iteration of the iterative dataflow analysis process does not increase the membership of said sets, the method comprising selecting and processing each basic block in a predetermined order by

copying into the set of entry properties of a currently selected basic block, the exit set of properties from a previously selected and processed basic block,

modifying the set of entry properties of the currently selected basic block in accordance with the property modifications caused by the currently selected basic block, to generate the exit properties for the currently selected basic block, and

performing iterations of said iterative dataflow analysis.

13. (original) The method of claim 12, wherein said predetermined order is a depth-first order.

14. (original) The method of claim 12, wherein said entry and exit properties comprise expressions available upon entry and exit from each basic block.

15. (original) The method of claim 14, wherein said modifications caused by a basic block comprise expressions generated by the basic block.

16. (original) The method of claim 15, wherein said modifications caused by a basic block further comprise expressions killed by the basic block.

17. (original) The method of claim 14, wherein said modifications caused by a basic block comprise expressions killed by the basic block.

18. (original) The method of claim 12, wherein the entry properties of the currently selected basic block are copied from the exit properties of a control flow predecessor of the currently selected basic block.

19. (original) The method of claim 12, wherein processing the current basic block further comprises removing from the entry properties of the currently selected basic block, any properties not found in the exit properties of all previously

selected and processed basic blocks which are control flow predecessors of the currently selected basic block.

Claim 20 through 23 are canceled.

24. (New) A computer system operating a compiler including an optimizer for calculating approximations of sets of entry and exit properties for each basic block of a computer procedure prior to performance of an iterative dataflow analysis, each basic block being associated with a set of entry and exit properties, as well as property modifications caused by the basic block, wherein each iteration of the iterative dataflow analysis process does not increase the membership of said sets, the optimizer selecting and processing each basic block in a predetermined order by

copying into the set of entry properties of a currently selected basic block, the exit set of properties from a previously selected and processed basic block,

modifying the set of entry properties of the currently selected basic block in accordance with the property modifications caused by the currently selected basic block, to generate the exit properties for the currently selected basic block, and

performing iterations of said iterative dataflow analysis.

25. (New) The computer system of claim 24, wherein said predetermined order is a depth-first order.

26. (New) The computer system of claim 24, wherein said entry and exit properties comprise expressions available upon entry and exit from each basic block.

27. (New) The computer system of claim 26, wherein said modifications caused by a basic block comprise expressions generated by the basic block.

28. (New) The computer system of claim 27, wherein said modifications caused by a basic block further comprise expressions killed by the basic block.

29. (New) The computer system of claim 26, wherein said modifications caused by a basic block comprise expressions killed by the basic block.

30. (New) The computer system of claim 24, wherein the entry properties of the currently selected basic block are copied from the exit properties of a control flow predecessor of the currently selected basic block.

31. (New) The computer system of claim 24, wherein processing the current basic block further comprises removing from the entry properties of the currently selected basic block, any properties not found in the exit properties of all previously selected and processed basic blocks which are control flow predecessors of the currently selected basic block.

32. (New) A program product comprising:

(a) a program defining the implementation of an optimizer for a compiler which calculates approximations of sets of entry and exit properties for each basic block of a computer procedure prior to performance of an iterative dataflow analysis, each basic block being associated with a set of entry and exit properties, as well as property modifications caused by the basic block, wherein each iteration of the iterative dataflow analysis process does not increase the membership of said sets, the program product comprising instructions for selecting and processing each basic block in a predetermined order by

copying into the set of entry properties of a currently selected basic block, the exit set of properties from a previously selected and processed basic block,

modifying the set of entry properties of the currently selected basic block in accordance with the property modifications caused by the currently selected basic block, to

generate the exit properties for the currently selected basic block, and

performing iterations of said iterative dataflow analysis; and

(b) a signal bearing media bearing the program.

33. (New) The program product of claim 32, wherein said predetermined order is a depth-first order.

34. (New) The program product of claim 32, wherein the signal bearing media is a transmission type media.

35. (New) The program product of claim 32, wherein the signal bearing media is a recordable media.